This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

1. – 2. (Canceled)

3. (Currently Amended) The method of claim [[2]] 11, further including the step of measuring the availability of bits by determining the decoder buffer fullness.

4. (Canceled)

5. (Original) The method of claim 3, further including the step of taking the output of the dynamic resolution selection step by coding the current frame non-predictively if the dynamic resolution selection step determines that the current frame be coded at a different resolution than the immediately preceding frame.

6. (Original) The method of claim 3, further including the step of taking the output of the dynamic resolution selection step by coding the current frame in a combined predictive and non-predictive fashion, with non-predictive coding favored, the decision between predictive and non-predictive coding taken on the basis of frame statistics for a plurality of previous frames and the current frame, if the dynamic resolution selection step determines that the current frame be coded at a different resolution than the immediately preceding frame.

7. (Original) The method of claim 6, wherein the statistics include an estimate of the motion, the estimate being based on motion information including the energy of the motion-compensated residual of the current frame.

8. (Currently Amended) The method of claim [[4]] 11, further including the step of determining if a high-to-low resolution switch being affected is given by the

following condition, the switch being affected if the condition C_1 evaluates to TRUE

$$C_1 = \{ \{Q > T_Q\} \text{ ~~&&~~ AND } \{M > T_M\} \} \text{ ~~H~~ OR } \{B_{dec} < T_B\}$$

where Q is a measure of the quantization scales used to encode a plurality of previous frames, M is a measure of the motion present in a plurality of previous frames and the current frame, B_{dec} is a measure of the decoder buffer fullness and T_Q, T_M and T_B are preset thresholds.

9. (Original) The method of claim 8, wherein the quantization measure is based on a rolling average of the quantization scales of a plurality of previous frames and the predicted quantization scale of the current frame.

10. (Original) The method of claim 8, wherein the quantization measure is based on a rolling average of the quantization scales of a plurality of previous frames, further the motion estimate is based on the rolling average of the motion measure of an individual frame, the measure being based on the energy of the motion-compensated residual of the frame and the motion vector magnitudes for the frame.

11. (Currently Amended) ~~The~~ A method for predictively encoding digital video sequences, comprising: ~~of claim 4,~~

dynamically determining the resolution of a current frame being encoded and outputting the determination, the selection being based on statistical and coding information of a plurality of frames, including at least one previous frame and the current frame; and,

selecting encoding parameters and encoding a current frame at a chosen resolution, wherein the encoding parameter selection step takes into account the determination of the dynamic resolution selection step in determining the encoding parameters,

wherein the statistical information includes scene-change information and estimated motion information, and the coding information includes a measure of the quantization used by the frames and a measure of the availability of bits, and,

wherein the dynamic resolution is further based on functional conditions based on the statistical and coding information, on the basis of which the resolution selection is performed are different for a low-to-high resolution switch as compared to a high-to-low resolution switch, the method further comprising:

~~further including the step of~~ determining if a low-to-high resolution switch being affected is given by the following condition, the switch being affected if the condition C_2 evaluates to TRUE

$$C_2 = \{Q.M^2 > T_{QM}\} \text{ ~~&&~~ AND } \{B_{dec} > T_{B2}\} \text{ ~~&&~~ AND } \{F_{curr} - F_{sc} > T_{sc}\}$$

where Q is a measure of the quantization scales used to encode a plurality of previous frames, M is a measure of the motion present in a plurality of previous frames and the current frame, B_{dec} is a measure of the decoder buffer fullness, where F_{curr} and F_{sc} are the frame numbers of the current frame and the last scene-change frame respectively and T_{QM} , T_{B2} and T_{SC} are preset thresholds.

12. (Original) The method of claim 11, wherein the quantization measure is based on a rolling average of the quantization scales of a plurality of previous frames and the predicted quantization scale of the current frame.

13. (Original) The method of claim 11, wherein the quantization measure is based on a rolling average of the quantization scales of a plurality of previous frames, further the motion estimate is based on the rolling average of the motion measure of an individual frame, the measure being based on the energy of the motion-compensated residual of the frame and the motion vector magnitudes for the frame.

14. (Currently Amended) The method of claim [[2]] 11, wherein the scene-change detection is based on the inter-pixel difference and frame mean of two successive frames.

15. – 33. (Canceled)